Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claims 1-33 (Canceled)

34. (Currently Amended) An implantable spinal fixation system, comprising:

an arcuate implant member having a length that is ~~of a size~~ sufficient so the arcuate implant member extends in a plane ~~to extend~~ between two adjacent vertebrate, the arcuate implant member having a cross-section being sized so that portions of the arcuate implant member including ends thereof ~~as to~~ extend through a preformed aperture that is formed in each of the two adjacent vertebrae.

35. (Original) The system of claim 34 wherein the implant member is constructed of one or more of a metal, bone, morphogenic protein, carbon fiber composite, nitinol or a biodegradable material.

36. (Currently Amended) A spinal system comprising:

an arcuate member that is surgically implanted within a mammalian spine so as to extend in a plane between two adjacent vertebrae of the spine, portions of the arcuate member also having a cross-section that is ~~being~~ configured so that the portions ~~as to~~ extend through a preformed aperture in each of the two adjacent vertebrae.

37. (Original) The system of claim 36 wherein the arcuate member is constructed of one or more of a metal, bone, morphogenic protein, carbon fiber composite, nitinol or a biodegradable material.

38. (Currently Amended) A spinal fusion kit comprising an arcuate fixation member that is configured so as to extend in a plane between two adjacent vertebrae and including portions each having a cross-section sized so the portions extend through a preformed aperture in each of the two adjacent vertebrae.

Claims 39-59 (Canceled)

60. (Previously Presented) A method for stabilizing adjacent vertebrae of a spine, comprising:

providing a cutting device including a rotating cutting implement having a midpoint;

positioning the cutting device proximal a surface of the adjacent vertebrae and so that the rotating cutting implement midpoint is located between the adjacent vertebrae;

rotatably cutting a common channel in the adjacent vertebrae with the rotary cutting implement; and

inserting a implant into the common channel so that the implant extends between the adjacent vertebrae and through the intervertebral space, the space between the adjacent verterbrae.

61. (Previously Presented) The stabilizing method of claim 60 wherein the cutting device being provided is configured such that the rotating cutting implement is moveable between a first position in which the rotating cutting implement is disposed within the cutting device and a second position in which a portion of the rotating cutting implement extends outside of the cutting device and wherein the step of rotatbly cutting includes moving the rotating cutting implement to the second position so as to rotatably cut the common channel in the adjacent vertebrae.

62. (Previously Presented) The stabilizing method of claim 60 wherein the implant includes a spacer element and wherein the step of inserting includes inserting the implant into the common channel such that the spacer element is disposed in the intervertebral space.

63. (Previously Presented) The stabilizing method of claim 60 wherein the step of positioning includes positioning the cutting device so the rotating cutting implement midpoint is located at the midpoint between the adjacent vertebrae

Claims 64-72 (Canceled)

73. (Previously Presented) The implantable spinal fixation system of claim 34, wherein the preformed aperture in each of the adjacent vertebrae is of a constant radius and wherein the arcuate implant member is configured so as to extend through each constant radius preformed aperture.

74. (Previously Presented) The implantable spinal fixation system of claim 34, wherein the arcuate implant member is configured so as to have a uniform outer diameter.

75. (Previously Presented) The implantable spinal fixation system of claim 34, wherein the arcuate implant member is configured so as to be secured by fixation points within the adjacent vertebrae.

76. (Previously Presented) The implantable spinal fixation system of claim 34, wherein the arcuate implant member is configured and sized so as to be a load bearing member.

77. (Previously Presented) The implantable spinal fixation system of claim 34, further including a plurality of securing mechanisms one for each of the adjacent vertebrae, each

securing mechanism being configured so as to secure the securing mechanism to one of the adjacent vertebrae, wherein the arcuate implant member is configured so as to be secured to each of the plurality of securing mechanisms.

78. (Previously Presented) The implantable spinal fixation system of claim 77, wherein each end portion of the arcuate implant member is configured so as to be secured respectively to one of the plurality of securing mechanisms, thereby securing each end portion to a corresponding one of the adjacent vertebrae.

79. (Previously Presented) The implantable spinal fixation system of claim 34, wherein the arcuate implant member is configured with a plurality of guiding means at each end of the arcuate implant member for guiding an anchor.

80. (Currently Amended) A method for stabilizing adjacent segments of a mammalian bone, comprising the steps of:

implanting an arcuate fixation member so that it extends in a plane ~~as to extend~~ between the adjacent bone segments and so portions of the arcuate fixation member including ends thereof extend through a preformed aperture in each of the adjacent bone segments.

81. (Previously Presented) The method of claim 80, further comprising the step of localizing opposing portions of the adjacent bone segments proximal to each other before said step of implanting.

82. (Previously Presented) The method of claim 80 wherein the preformed aperture has been drilled in each of the adjacent bone segments.

83. (Previously Presented) The method of claim 80 further comprising the step of forming a through aperture in at least one of the adjacent bone segments.

84. (Previously Presented) The method of claim 83 wherein said step of forming further includes forming a through aperture in each of the adjacent bone segments.

85. (Previously Presented) The method of claim 80 wherein the preformed apertures in each of the adjacent bone segments are formed so as to have a common axis of rotation.

86. (Previously Presented) The method of claim 85 wherein the preformed apertures in each of the adjacent bone segments are formed in the respective bone segment by one of drilling or ablation of the bone by an energy source.

87. (Previously Presented) The method of claim 83 wherein the step of forming includes forming an aperture in at least one of the adjacent bone segments by one of drilling or ablation of the bone by an energy source.

88. (Previously Presented) The method of claim 83 wherein the step of forming includes drilling an aperture in each of the adjacent bone segments so as to create intersecting apertures with convergent paths.

89. (Previously Presented) The method of claim 80, wherein the step of implanting includes successively moving a portion of the arcuate fixation member through the preformed aperture in one adjacent bone segment and into the preformed aperture of the other adjacent bone segment.

90. (Previously Presented) The method of claim 80 wherein the arcuate fixation member is made from one or more of a metal, bone, morphogenic protein, carbon fiber composite, nitinol or a biodegradable material.

91. (Currently Amended) A spinal fixation system, comprising:

a plurality of securing members, each securing member being configured so as to be secured respectively in one of the adjacent vertebrae;

an arcuate member having a length sufficient so that the arcuate member extends in a ~~plane of a size sufficient to extend~~ between the two adjacent vertebrate; and

wherein each of the plurality of securing members is configured so as to mechanically engage separate portions of the arcuate member, thereby securing the arcuate member to each of the adjacent vertebrae.

92. (Previously Presented) The spinal fixation system of claim 91, wherein each of the plurality of securing members are configured so as to be threadably secured respectively in one of the adjacent vertebrae.

93. (Currently Amended) A method for stabilizing adjacent vertebrae of a mammalian spine comprising the steps of:

providing a plurality of securing members, each securing member being configured so as to be secured respectively in one of the adjacent vertebrae and an arcuate member having a length ~~of a size~~ sufficient so the arcuate members extends in a plane ~~to extend~~ between the adjacent vertebrate; and

securing one end portion of the arcuate member to one of the plurality of securing members and securing said one of the plurality of securing members to one of the adjacent vertebrae and securing another end portion of the arcuate member to another of the plurality of

securing members and securing said another of the plurality of securing members to the other of the adjacent vertebrae.

94. (Previously Presented) The stabilizing method of claim 93, wherein said securing includes threadably secured said each of the plurality of securing members respectively to said one of the adjacent vertebrae.

95. (Currently Amended) A method for stabilizing adjacent vertebrae of a mammalian spine comprising the steps of:

providing an arcuate member ~~having a length of a size~~ sufficient to extend in a plane between the two adjacent vertebrate;

rotating the arcuate member from a first position to a second position; and

securing end portions of the arcuate member to respective adjacent vertebrae when the arcuate member is rotated into the second position.

96. (Previously Presented) The stabilizing method of claim 95, wherein said securing includes threadably secured said end portions to said respective adjacent vertebrae.

97. (Previously Presented) The stabilizing method of claim 95, further comprising the steps of:

localizing a rotating mechanism so a pivot point thereof is disposed at a predetermined location with respect to the adjacent vertebrae;

securing the arcuate member to the rotating mechanism; and

wherein said step of rotating includes rotating the arcuate member using the rotating mechanism from the first position to the second position.

98. (Previously Presented) The stabilizing method of claim 97, wherein said securing includes threadably secured said end portions to said respective adjacent vertebrae.

99. (Previously Presented) The stabilizing method of claim 95, wherein:
said providing includes providing a plurality of securing members; and
said securing includes:

securing one end portion of the arcuate member to one of the plurality of securing members and threadably securing said one of the plurality of securing members to one of the adjacent vertebrae, and

securing another end portion of the arcuate member to another of the plurality of securing members and threadably securing said another of the plurality of securing members to the other of the adjacent vertebrae.

100. (Previously Presented) The stabilizing method of claim 95, wherein said rotating includes rotating the arcuate member about a pivot point that is remote from the adjacent vertebrae.